ATTACHMENT E

Marked Up Replacement Claims

Following herewith is a marked up copy of each rewritten claim together with all other pending claims.

1. (Amended) ~~Purified~~ A purified ULIP polypeptide comprising an amino acid sequence selected from SEQ ID No. 2, No. 4, No. 6 and No. 8.

2. (Amended) ~~Purified~~ The purified ULIP polypeptide according to Claim 1, comprising the amino acid sequence SEQ ID No. 8~~, the said polypeptide being designated by "POP-66"~~.

3. (Amended) ~~Isolated~~ An isolated nucleotide acid comprising a sequence coding for a ULIP polypeptide of amino acid sequence SEQ ID No. 2, No. 4, No. 6 or No. 8.

4. (Amended) ~~Nucleic~~ The nucleic acid according to Claim 3, comprising a sequence selected from SEQ ID No. 1, No. 3, No. 5 or No. 7, respectively coding ~~for a~~ the ULIP polypeptide of amino acid sequence SEQ ID No. 2, No. 4, No. 6 or No. 8.

5. (Twice Amended) ~~Nucleic~~ The nucleic acid according to Claim 4, comprising the nucleotide sequence SEQ ID No. 7 coding ~~for a comprising~~ the amino acid sequence SEQ ID No. 8~~, said polypeptide being designated by "POP-66"~~.

6. (Twice Amended) ~~Cloning~~ A cloning and/or expression vector containing a nucleic acid sequence according to Claim 3.

7. (Amended) ~~Host~~ A host cell transfected by a vector according to Claim 6.

9. (Amended) ~~Composition~~ A composition useful for the diagnosis of paraneoplastic neurological syndromes and/or for the early diagnosis of the formation of ~~tumours, characterized in that it comprises~~ tumors, said composition comprising a purified ~~POP 66~~ polypeptide~~, according to Claim 2~~ comprising amino acid sequence SEQ ID No. 8.

10. (Twice Amended) ~~Use of a~~ A method for using purified ~~POP 66~~ ULIP polypeptide comprising SEQ ID No. 8~~according to Claim 2~~, a derivative or biologically active polypeptide fragment ~~of POP 66~~ thereof, or of a nucleic acid comprising the nucleotide sequence of SEQ ID No. 7 for detecting the presence of anti-CV2 antibodies in a biological sample.

14. (Amended) ~~Method~~ A method for the diagnosis of paraneoplastic neurological syndromes and/or for the early diagnosis of the formation of ~~cancerous tumours, characterized in that auto-antibodies directed against a POP 66 protein are demonstrated in a blood sample taken from an individual by~~ tumors, comprising:

- ~~the~~ contacting ~~of~~ a blood sample taken from an individual with a purified ULIP polypeptide ~~(POP 66) according to Claim 2~~, comprising SEQ ID No. 8, a derivative

or biologically active polypeptide fragment ~~of POP-66~~ thereof, optionally attached to a support under conditions allowing the formation of specific immunological complexes between the ~~said~~ polypeptide and the auto-antibodies optionally present in the blood sample, and

- ~~the detection of the~~ detecting specific immunological complexes optionally formed, the specific immunological complexes being indicative of a paraneoplastic neurological syndrome or of a tumor.

15. (Amended) ~~Kit~~ A kit for ~~the~~ diagnosis ~~of~~ in paraneoplastic neurological syndromes and for ~~the~~ deleting early diagnosis of the formation of ~~tumours~~ tumors from a biological sample, comprising:

- at least one purified ~~POP-66, according to Claim 2,~~ ULIP polypeptide comprising SEQ ID No. 8, a derivative or biologically active polypeptide fragment of ~~POP-66~~ the ULIP~~polypeptide,~~ optionally attached to a support, and

- means of visualization of the formation of specific antigen/antibody complexes between an anti-POP-66 auto-antibody and the ~~said~~ purified ~~POP-66~~ ULIP polypeptide, derivative or polypeptide fragment and/or means of qualification of these complexes.

16. Canceled.

17. Canceled.

marked claims

20. (Amended) A method of diagnosing a paraneoplastic syndrome in a subject, said method comprising the steps of:

contacting a sample from the subject with a ~~POP-66~~ polypeptide comprising a purified ULIP polypeptide selected from the group consisting of amino acid SEQ ID No. 8, a derivative or biological active polypeptide thereof, said contacting carried out under conditions sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

detecting the specific immunological complexes formed;

wherein the presence of immunological complexes is indicative of a paraneoplastic syndrome in said subject.

21. (Amended) The method of claim 20, wherein the polypeptide ~~is the entire POP-66 protein~~ sequence is SEQ ID No. 8.

22. (Amended) The method of claim 20, wherein the polypeptide is an antigenic fragment of ~~the POP-66 protein~~ a polypeptide comprising amino acid sequence SEQ ID No. 8.

23. A method of diagnosing a paraneoplastic syndrome in a subject, said method comprising, the steps of:

contacting a sample from the subject with a peptide capable of forming a specific immunological complex with an antibody, said antibody capable of forming a specific immunological complex with a ULIP polypeptide, wherein said contacting is carried out

under conditions sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

detecting the specific immunological complexes formed;

wherein the presence of immunological complexes is indicative of a paraneoplastic syndrome in said subject.

24. (Amended) A ~~method of diagnosing a paraneoplastic syndrome in a subject~~, said method comprising the steps of:

contacting a sample from said subject with a peptide capable of forming a specific immunological complex with an antibody, said antibody capable of forming a specific immunological complex with ~~POP-66~~ a polypeptide comprising amino acid sequence SEQ ID No. 8, wherein said contacting is carried out under conditions sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

detecting the specific immunological complexes formed between the peptide and antibodies in the sample;

wherein the presence of specific immunological complexes formed between the peptide and antibodies is indicative of a paraneoplastic syndrome in said subject

25. (Amended) A method of diagnosing the formation of a tumor of cancerous origin in a subject, said method comprising the steps of:

contacting a sample from said subject with a ~~POP-66~~ polypeptide comprising amino acid sequence SEQ ID No. 8, said contacting carried out under conditions

sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

detecting the specific immunological complexes formed;

wherein the presence of immunological complexes is indicative of the formation of a tumor in said subject.

26. (Amended) The method of claim 25, wherein the polypeptide ~~is the entire POP-66 protein~~ comprising amino acid sequence SEQ ID No. 8.

27. (Amended) The method of claim 25, wherein the polypeptide is an antigenic fragment of ~~the POP-66 protein~~ a polypeptide comprising amino acid sequence SEQ ID No. 8.

28. A method of diagnosing the formation of a tumor of cancerous origin in a subject, said method comprising the steps of:

contacting a sample from said, subject with a ULIP polypeptide, wherein said contacting is carried out under conditions sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

detecting the specific immunological complexes formed;

wherein the presence of immunological complexes is indicative of the formation of a tumor in said subject.

29. (Amended) A method of diagnosing the formation of a tumor of cancerous origin in a subject, said method comprising the steps of:

contacting a sample from said subject with a peptide capable of forming a specific immunological complex with an antibody, said antibody capable of forming a specific immunological complex with ~~POP-66~~ a polypeptide comprising amino acid sequence SEQ ID No. 8, wherein said contacting is carried out under conditions sufficient to allow the formation of specific immunological complexes between the peptide and antibodies present within the sample; and

detecting the specific immunological complexes formed between the peptide and antibodies in the sample;

wherein the presence of specific immunological complexes formed between the peptide and antibodies is indicative of the formation of a tumor in said subject.

30. (Amended) A diagnostic substrate for *ex vivo* identifying antibodies to ~~POP-66~~ a polypeptide comprising amino acid sequence SEQ ID No. 8 in a subject, said substrate comprising:

a solid support; and

a peptide comprising an antigenic portion of ~~POP-66~~ said polypeptide.

31. (Amended) The substrate of claim ~~27~~ 30, wherein the support comprises animal brain, and wherein the antigenic portion of ~~POP-66~~ the polypeptide is endogenous to said brain.

marked claims

32. (Amended) The substrate of claim ~~27~~ 30, wherein the antigenic portion of ~~POP-66~~ a polypeptide comprising amino acid sequence of SEQ ID No. 8 is attached to said support.

33. (Amended) A diagnostic kit for identifying antibodies to ~~POP-66~~ a polypeptide comprising amino acid sequence of SEQ ID No. 8 in a subject, said kit comprising an antigenic portion of ~~POP-66~~ said polypeptide or a derivative thereof.

34. (Amended) The kit of claim ~~29~~ 33, wherein the kit further comprises means of visualizing formation of ~~POP-66~~ said polypeptide-antibody complexes.

35. (Amended) The kit of claim ~~29~~33, wherein the antigenic portion of ~~POP-66~~ said polypeptide is purified.